

STATINTL

Third Monthly Letter Report

OPEN GATE STUDY

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STATINTL

Declass Review by NIMA / DoD

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I. PURPOSE OF STUDY

The objective of this study is to determine the feasibility of a continuous film-to-film contact printer that uses open-gate techniques and has an output performance compatible with current state-of-the-art. Known factors contributing to degradation of image quality in the system are to be analyzed.

Specific attention will be paid to the problems of assuring film contact in the printer gate, as well as possible advantages of using "liquid gate" techniques in the system. Also techniques for film cleaning will be evaluated. The study will be summarized in a test plan, which defines a program to evaluate experimentally the most promising approaches.

II. ACTIVITY OF THIS REPORTING PERIOD

We have completed our evaluation of techniques and have prepared a draft of the final report to be submitted on this program. Liquid gate techniques and air bearing systems appear at the present time to be the most promising methods for open gates.

Ultrasonic film cleaners appear to present the best overall cleaning capability. Electrostatics may provide a good alternative for cleaning.

III. PLANS FOR NEXT PERIOD

The final report and test plan will be submitted during this period.